CLAIMS

1. Method of automatically replicating data objects between a mobile device and a server, connected together via a wireless network, in which the timing of data replication across the network is determined by a network operator applying parameters that make efficient usage of network bandwidth.

2. The method of Claim 1 in which the parameters applied to a given object are both time dependent and also relate to how urgently that object needs to be replicated.

3. The method of Claim 1 or 2 in which a change log lists all objects at the device and/or server to be replicated and the parameters then comprise a weight associated with each object that defines how urgently that object needs to be replicated.

4. The method of Claim 3 in which the parameters further comprise a threshold that is a function of time, with the weight of each object being locally compared to the threshold at a given time and the outcome of the comparison determining whether the object is sent for replication or not at that time.

5. The method of Claim 4 in which a connection is established at a given time if the weight of any object exceeds the threshold at that time.

6. The method of Claim 3 in which the weight of an object at a given time is a function of one or more of the following:

(a) Direction of data replication (device to server or server to device)
(b) Shelf life, defining the time or duration after which the object will be automatically deleted if still present in the change log
(c) Whether the object is overwritable
(d) Size in bytes
(e) Time entered into the change log
(f) Priority
(g) Time out interval

(h) Assigned time for replication

(i) User assignment of a non-default priority to a given object

(j) Memory available

7. The method of Claim 6 in which the network operator can cause the weight of an object to be altered at any time.

8. The method of Claim 4 in which the network operator can cause the threshold to be altered at any time.

9. The method of Claim 4 in which the threshold varies over time in such a way that efficient use is made of available bandwidth.

10. The method of Claim 4 in which the threshold can vary over time in a different way for different groups of end-users, individual end-users or applications.

11. The method of Claim 4 in which dynamic varying of the threshold can occur as cell or network loadings change.

12. The method of Claim 4 in which dynamic varying of the threshold can occur to encourage uptake of a new data replication service.

13. The method of Claim 4 in which the threshold can vary depending on one or more of the following:

(a) current time

(b) device roaming status

(c) cell or network loading

(d) time since last replication

(e) user tariff

14. The method of Claim 4 in which, if the weight of no object exceeds the threshold at a given time, the time interval that will elapse before the weight of any object exceeds the threshold is calculated and a timer set for that time interval.

15. The method of Claim 14 in which the time interval is re-calculated if:

(a) a new object is added to the change log
(b) a new threshold is deployed
(c) the timer expires
(d) cell or network loading alters
(e) device memory falls below a predefined level
(f) the device detects that its roaming state changes
(g) a new application is activated on the device
(h) a network connection is terminated

16. The method of Claim 1 in which the end-user of the device can override default replication timing in respect of a specific object or type of object.

17. The method of Claim 1 in which an object to be replicated is assigned a time limit by which time replication must occur.

18. The method of Claim 17 in which the time limit is dynamic.

19. The method of Claim 17 in which the time limit alters if memory on the device changes or if the device roams to a new network

20. The method of Claim 1 in which an object to be replicated is assigned a shelf life which defines a time or duration after which the object will be deleted automatically if not replicated.

21. The method of Claim 1 in which different parameters enable the network operator to offer end-users different levels of data replication service, each associated with a different tariff.

22. The method of Claim 1 in which, once a connection initiating object has been replicated, then further objects in a change log and pending replication are sent as well.

23. The method of Claim 22 in which an opportunism threshold function determines the further objects that are sent.

24. The method of Claim 23 in which the opportunism threshold changes if the device is on a roaming network.

25. The method of Claim 23 in which the opportunism threshold changes depending on whether a cell loading threshold of the cell the device is located in is exceeded.

26. The method of Claim 23 in which the opportunism threshold is applied consistently by device and server, with changes to the threshold communicated across the network.

27. The method of Claim 23 in which the network operator can vary the opportunism threshold.

28. The method of Claim 1 in which the actual time of replication is a function of the state of the mobile device, the state of the network and the parameters.

29. A mobile device programmed with software that enables the device to replicate data to a server using the method of Claim 1.

30. A server programmed with software that enables the server to replicate data to a mobile device using the method of Claim 1.